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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,597	12/22/2003	John R. Mick JR.	5646-120	7564

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EXAMINER

NGUYEN, THAN VINH

ART UNIT	PAPER NUMBER
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2187

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/743,597

Applicant(s)

MICK ET AL.

Examiner

Than Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-14 and 16-41 is/are rejected.
- 7) ☒ Claim(s) 3 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/22/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-35 are pending.
2. The IDS, filed 12/22/03, has been considered.

Claim Objections

3. Claims 2-12,14-22,24-29,31-35,37 objected to because of the following informalities:

(Line 1 of claim) Replace "A chip" with --An integrated circuit chip--.

***** This maintains claim terminology consistency. *****

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 9 recites the limitation "the memory interface circuit" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is vague as how the index translation circuit, which provides CAM translation, provides "compaction" of the memory space. Where is this function disclosed in the specification?

Claim Rejections - 35 USC § 102

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7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1,2,4-8,10-14,16-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Cheng et al (US 6,889,225) B2.

As to claim 1,13,23,30,36,38:

Cheng teaches a content addressable memory search engine. Cheng teaches an integrated circuit chip comprising: a search engine (210) including a content addressable memory (CAM 224) configured to produce CAM indices responsive to search instructions provided to the search engine and an index translation circuit (logic 226) operatively coupled to the CAM and configured to provide translation of the CAM indices (7/18-53; 8/8-31; Fig. 3-4).

As to claim 2,14,18,24,26,41:

9. Cheng teaches the index translation circuit is configurable to provide independent index mappings for respective segments of the CAM (provide CAM address translation/mapping; 8/24-41).

As to claim 4,18,27,37:

Cheng teaches the index translation circuit is configurable to provide independent index mappings for respective databases (logic 226 provide CAM mappings; 8/24-31).

As to claim 5,16,17,40:

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10. Cheng teaches the index translation circuit is configurable to provide translation of the CAM indices to any of a plurality of memory spaces (logic unit 226 provides translation of CAM index; 8/24-31).

As to claim 6:

11. Cheng teaches the index translation circuit is configurable to provide translation of absolute indices associated (translate CAM index; 8/24-31).

with a search machine comprising the search engine to database relative indices and memory addresses.

As to claim 7,8,10,19,20,25,32,33:

12. Cheng teaches translating CAM indices into addresses (8/24-31).

As to claim 11,12,21,22,28,29,31,35:

13. Cheng teaches the index translation circuit comprises a mapping table operative to associate respective combinations of a shift factor and a base address for a database with respective CAM segment identifiers, wherein the shift factors indicate database entry size, and wherein the index translation circuit is operative to receive a CAM index, to identify a base address and a shift factor corresponding to a CAM segment identifier in the received CAM index, to concatenate the identified base address with a segment entry offset in the received CAM index, and to shift the concatenated result according to the identified shift factor to produce a database relative index corresponding to the received CAM index (translation using base address and offset; 6/55-67)..

As to claim 34,39:

14. Cheng teaches a memory space (8/24-58). The memory space could be for any device.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al (US 6,889,225 B2).

As to claim 9:

17. Cheng does not teach the [CAM] memory interface being SRAM. It is common in the art to use SRAM to store data. Thus, it would have been obvious to one of ordinary to use SRAM as the CAM interface of Cheng.

Allowable Subject Matter

18. Claims 3,15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including **all of the limitations of the base claim and any intervening claims.**

19. As to claim 3,15 the prior art does not suggest the index translation circuit is configured to receive CAM indices from a second search engine device and is configurable to provide independent index mappings for respective segments of the second search machine device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Than Nguyen whose telephone number is 571-272-4198. The examiner can normally be reached on 8am-3pm M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Than Nguyen can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Than Nguyen
Primary Examiner
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